

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: POVERTY POND	Lake Area (ha):	4.49
Town: HILL	Maximum depth (m):	10.3
County: Merrimack	Mean depth (m):	1.9
River Basin: Merrimack	Volume (m <sup>3</sup> ):	86000
Latitude: 43°30'30" N	Relative depth:	4.3
Longitude: 71°48'10" W	Shore configuration:	---
Elevation (ft): 1185	Areal water load (m/yr):	14.68
Shore length (m): ---	Flushing rate (yr <sup>-1</sup> ):	7.70
Watershed area (ha): 129.7	P retention coeff.:	0.51
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

	12 February 1990	14 August 1989
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 95%	CHRYOSOPHAERELLA 70%
#2		DINOBRYON 25%
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		875.0
CHLOROPHYLL-A (µg/L)		5.81
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 61%	KERATELLA 60%
#2	LARGE GREEN CILIATE 39%	NAUPLIUS LARVA 28%
#3		CYCLOPOID COPEPOD 8%
ROTIFERS/LITER	72	259
MICROCRUSTACEA/LITER	0	166
ZOOPLANKTON ABUNDANCE (#/L)	118	425
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		5.0
BOTTOM DISSOLVED OXYGEN (mg/L)	2.1	0.9
BACTERIA (fecal col., #/100 ml) #1		
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.2  
Hypolimnion volume (m<sup>3</sup>): 4000

CHEMICAL:

Lake: POVERTY POND

Town: HILL

	12 February 1990		14 August 1989		
DEPTH (m)	3.0	5.0	1.5	5.5	9.0
pH (units)	5.7	5.7	5.9	5.8	5.9
A.N.C. (Alkalinity)	2.1	2.8	0.5	1.2	7.9
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.25	0.27	0.23	0.26	0.67
TOTAL PHOSPHORUS	0.005	0.005	0.010	0.009	0.027
CONDUCTIVITY ( $\mu$ mhos/cm)	25.4	27.2	18.0	21.6	30.0
APPARENT COLOR (cpu)	14	17	12	12	49
MAGNESIUM			0.26		
CALCIUM			2.0		
SODIUM			< 3.0		
POTASSIUM			0.20		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	5	5	5		3
TN : TP	50	54	23		25
CALCITE SATURATION INDEX			5.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1989

D.O. S.D. PLANT CHL TOTAL CLASS

3	2	6	1	12	Meso.
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COMMENTS:

1. No public access.
2. Most of this area is more a wetland than a pond.
3. Dominant whole-water phytoplankton genera were Peridinium (40%) and tiny green flagellates (40%).

# Poverty Pond

Hill

N

10

20

30

X34

10 FT. ISOBATHS

*launch*

ROUGH BATHYMETRIC CHART  
SOUNDED BY FATHOMETER  
DES - 1989

0

.2

km

111-202

[illegible]

COMMENTS:

TIME: 1100

\*Dissolved oxygen values are in mg/L

# Poverty Pond

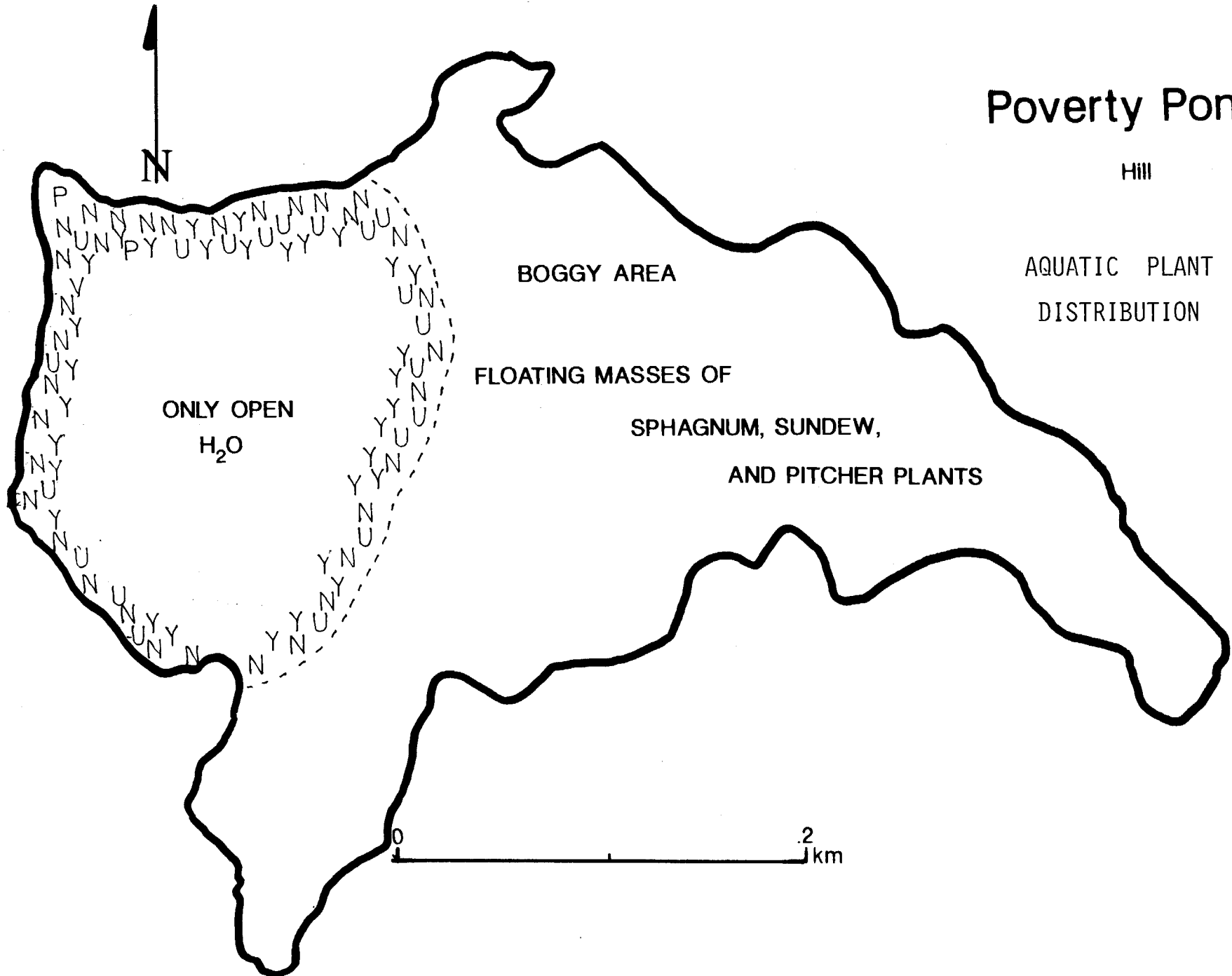
Hill

AQUATIC PLANT  
DISTRIBUTION

BOGGY AREA

FLOATING MASSES OF  
SPHAGNUM, SUNDEW,  
AND PITCHER PLANTS

ONLY OPEN  
H<sub>2</sub>O



111-204

[illegible]